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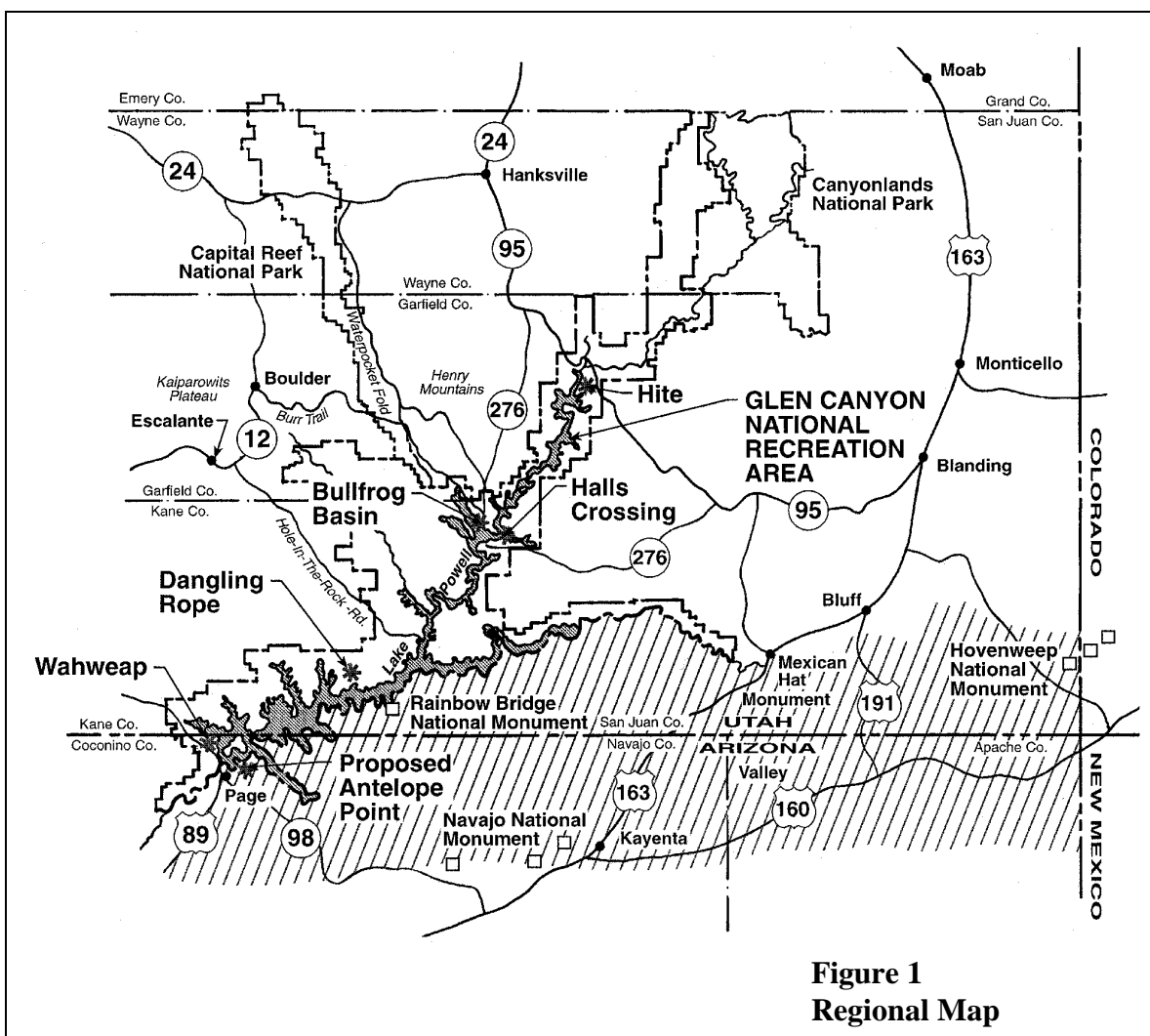
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# NEED FOR THE PLAN

## INTRODUCTION AND BACKGROUND

Glen Canyon National Recreation Area (NRA) is a 1.25-million-acre recreation and conservation unit of the National Park Service (NPS) established in southeastern Utah and northeastern Arizona in 1972 (Figure 1).

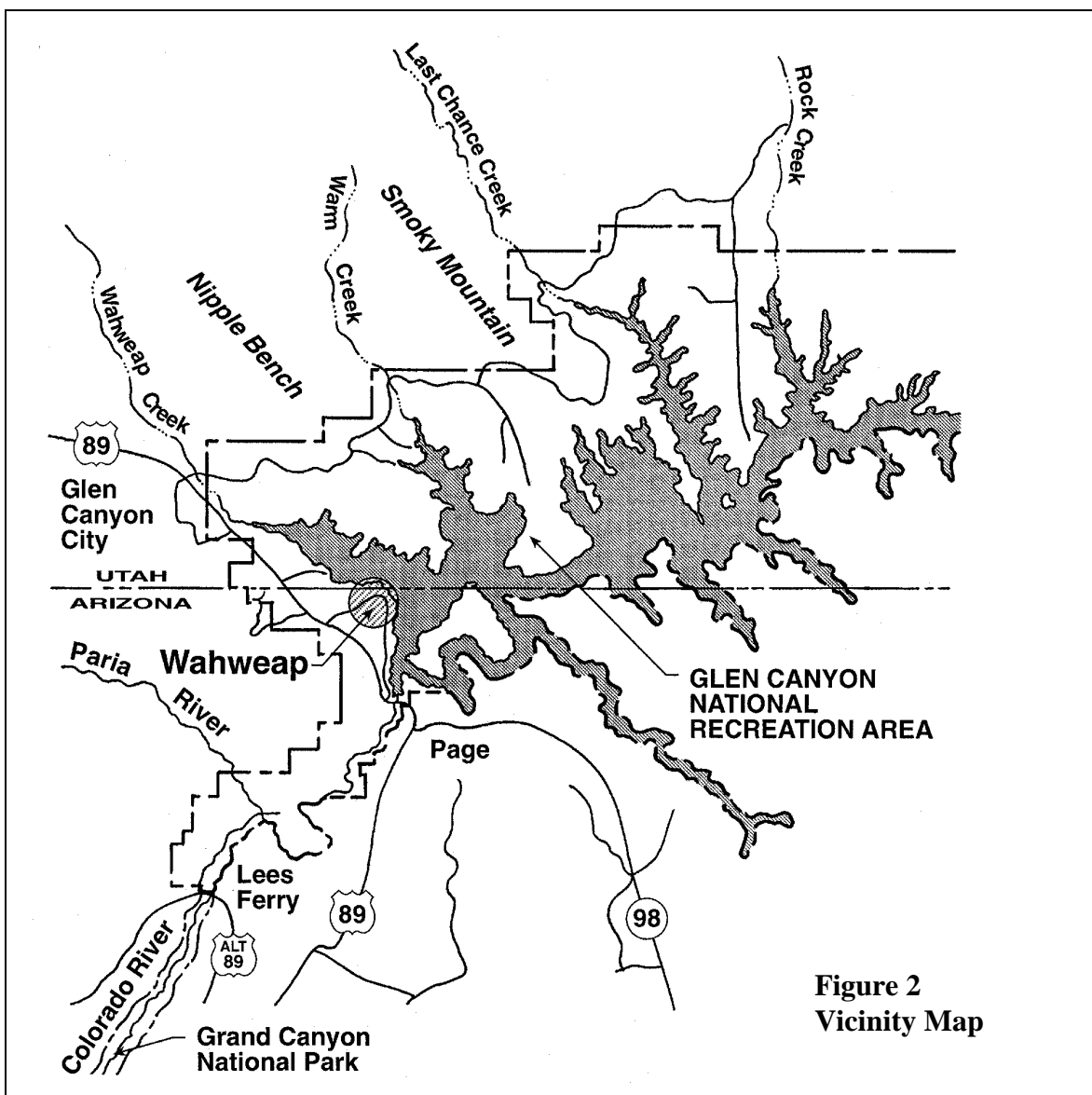


Its major recreational component is Lake Powell, a man made lake on the Colorado River formed by Glen Canyon Dam whose primary purposes are flood control, river regulation, irrigation, and hydroelectric power generation. Recreational access to Lake Powell is through the following permanently developed marinas: Wahweap, Dangling Rope, Bullfrog Basin, Halls Crossing, and Hite. By 1986 these marinas had provided lake access to 2.3 million people per year,



considerably more than the 500,000 forecast for the year 2000 when original planning estimates were developed in the 1950s. The large number of visitors has created a high demand for facilities and services on the lake requiring updated planning for future project development.

In November 1979 the General Management Plan (GMP) for Glen Canyon NRA was approved, which designated Wahweap as a development management zone. Wahweap (consisting of marina and lodge areas along with Stateline facilities) is at the southern end of Lake Powell, near the



Glen Canyon Dam (Figure 2).

The communities of Page Arizona, Big Water, and Greenhaven Utah, are closest to the marina. Wahweap was to become a major tourist resort facility with an emphasis on providing overnight use, marina services, and access for water based recreational opportunities, with visitor services



provided primarily in Page. Since 1971, the number of visitors to Wahweap has steadily increased. Overall visitation to Glen Canyon NRA has increased during the last 15 years from 1,826,572 visitors in 1982 to 2,532,087 visitors in 1996. Because the Wahweap development area is limited to 10,010 acres by the GMP, development activities must be thoroughly examined to ensure that they fit within development objectives and provide visitor use and enjoyment. Development that is proposed in the Development Concept Plan (DCP) for the next 10 to 15 years must conform to the GMP guidelines according to the NPS planning process.

The current DCP for Wahweap was completed in 1983 (NPS 1983). Since then, most of the proposed development from that plan has been accomplished (Figure 3). An increase in visitor use and demands has warranted a reassessment and update of current development and management options.

This final plan for the DCP outlines specific development and management elements for the Wahweap and Stateline facilities. The final plan has been developed from a combined Draft DCP and an Environmental Assessment (EA) that evaluated the environmental and social effects that would likely result from implementing a range of alternative plans in the next 10 to 15 years. The EA tiered off the Environmental Impact Statement (EIS) prepared with the original GMP in compliance with the National Environmental Policy Act.

## **PLANNING OBJECTIVES**

Planning objectives for the Wahweap development area were derived from a variety of sources including the GMP (NPS 1979), public and employee scoping meetings and subsequent review meetings, and the NPS performance goals. These objectives are:

- preserve the quality of natural resources and recreational opportunities
- provide operational and management guidelines to direct development activities employed by the NPS and Concessioner
- not exceed land development allowances and established lake carrying capacities
- provide additional water based recreational opportunities, and/or increase facilities currently provided, to meet visitor needs
- identify employee needs including upgrading existing facilities (e.g., housing, office space)
- identify Concessioner's commercial, operational, and maintenance needs
- identify and recommend accessibility improvements for visitors with disabilities



## FIGURE 3



## PLANNING ISSUES AND CONCERNS

Several issues and concerns were identified from previous planning efforts and through a series of public meetings. The implementation of development activities at the Wahweap Development Area will be influenced by the priority given to:

- development at Antelope Point
- Lake Powell's carrying capacity limits for resource preservation and safety
- management guidelines such as the Water Quality Initiative between the NPS and the states of Arizona and Utah
- 1997 Housing Needs Assessment.

### **Antelope Point Development Concept Plan**

Development at Wahweap will be implemented according to a schedule that meets the overall objectives of the NRA, which include prioritizing development activities at Antelope Point. In 1970, a Memorandum of Agreement was signed between NPS, Navajo Nation, Bureau of Indian Affairs, and Bureau of Reclamation. This agreement allows for a joint partnership between the respective agencies to work with the Navajo Nation to develop Antelope Point as a means to provide economic opportunities for the Navajo Nation while providing additional recreational facilities for Lake Powell visitors. The NPS heard, through the public planning process, of the need for additional marina facilities (slips, dock space, restrooms, etc.). The NPS is working to develop the Antelope Point marina to provide these facilities. Implementing the Antelope Point DCP will aid in reducing traffic congestion and expansion pressure at Wahweap and will realize the economic commitment to the Navajo Nation.

### **Carrying Capacity**

Although the main recreational emphasis at Wahweap is water sports, understanding that future development and expansion of boating facilities are limited is important due to preservation of park resources and recreation quality. In response to these objectives, NPS published *The Carrying Capacity of Lake Powell: A Management Analysis of Capacity for Boater Recreation* that provided guideline limits of boater capacity levels for Lake Powell (NPS 1987). The results of the carrying capacity study provided launch rate limitations for each of Lake Powell's 12 zones, constraining the number of vessels launched from each of the developed areas. Wahweap is within Zone1.

The marina launch capacity for Wahweap (including Stateline and Lone Rock) approved in the 1983 DCP was 870 marina launches per day. In addition, the DCP for Antelope Point allocated 240 marina launches per day once the marina is completed, which would result in a composite total of 1,110 marina launches per day for these two facilities. This is the maximum approved



launch rate based on the implementation of management actions to protect park resources and water quality. The rate is below the maximum lake carrying capacity of 1,358 for Zone 1.

As additional management actions are implemented, the marina launch carrying capacity for Wahweap and Antelope Point can be increased from 850 to 1,110. These actions include implementing the Strategic Monitoring Plan; enforcement to require proper waste disposal and containment; and the addition of boat pumpout stations, vehicle-accessible dump stations, and portable toilet dump stations. According to the carrying capacity analysis report, the daily marina launch capacity for developed areas at Lake Powell could then be expanded to 1,850 boats per day.

The width of the launch ramps was designed to limit the number of boats that can be launched at one time. According to the carrying capacity analysis, the Wahweap and Stateline ramps could accommodate 10 launch lanes (15 feet/lane), for a total of 150 feet. However the use on the ramps is averaging over 18 feet, thus only 8 lanes are being utilized. This appears to be the most practical and narrowest lane width for an average driver to maneuver a vehicle and trailer. Furthermore, the outer two lanes are often used for parking while loading/unloading houseboats off the courtesy docks. This usually allows only 6 lanes for the actual launching and retrieval of boats and personal watercraft (PWC).

For future planning purposes, the results of monitoring and the implementation of improvements to meet the carrying capacity requirements will need to be reviewed before any increase in boat launches per day at Wahweap or Antelope Point, above the current rate of 1,110, is authorized. Carrying capacity issues that will need to be considered prior to any increase in the number of launches above 1,110 are the “social” and “physical capacity” of Zone 1 (Wahweap/Antelope Point areas).

### **Human/Pet Waste Containment**

One primary source of water contamination at Lake Powell is human waste left improperly buried along the shoreline and illegally discharged or dumped into the lake. Increased boater use, shoreline camping, and fluctuating water levels are strongly correlated with water quality degradation. While camping near the shoreline when the lake is at low water level, individuals bury feces that release fecal coliform bacteria when the water level rises. Increased levels of bacteria also result from improper containment and illegal disposal of waste into Lake Powell. Additionally, water quality is adversely affected by leaving pet wastes on the shoreline, and from petroleum wastes being spilled or discharged into the reservoir.



## **Water Quality Initiative**

The water quality of Lake Powell has been monitored since 1988. Over the past 10 years, several beaches were temporarily closed because of high fecal coliform bacteria levels. There were 11 beach closures in 1995. In response to these conditions, NPS entered into the Strategic Monitoring Plan with the Arizona Department of Environmental Quality and Utah Department of Environmental Quality to develop and initiate a program to improve and protect the water quality of Lake Powell. Since the water quality initiatives were instituted, there were three beach closures in 1996, and only one in 1997.

The initiatives require anyone camping within one-quarter mile of Lake Powell's shoreline to be self-contained. If not self-contained, campers must stay within 200 feet of a vault toilet at vehicle-accessible shorelines. Restrooms and dump stations are being constructed at all launch ramps. A portion of entrance fees goes toward funding of the water quality initiatives, like the Water Quality Patrol program, and hiring of additional seasonal rangers to enforce sewage containment regulations. In addition, alternative funding sources have allowed the deployment of 8 floating pumpouts/restrooms on Lake Powell, and placement of additional restrooms and portable toilets at specific backcountry vehicle accessible shoreline camping areas.

## **Personal Watercraft Limited Usage**

During the public meetings, some individuals suggested that a separate PWC launch ramp should be included in the DCP. The nationwide increase in PWC use in national parks has become a concern due to possible impacts to resources and the visitor experience. In some cases the impacts were assessed to be significant and, consequently, the NPS is preparing regulations that propose restrictions on, or elimination of, PWC use within units of the NPS. Currently, individual superintendents have the discretionary authority to eliminate, confine, and/or restrict PWC use. For purposes of this DCP, PWC use was not evaluated. However, several criteria were examined which include land use (e.g., availability of marina space), carrying capacity, and effects on resource preservation. Due to the lack of available land suitable for launch ramp facilities and the carrying capacity launch ramp limitations discussed previously, this suggestion was omitted as a possible development option.

## **NPS Housing Initiative**

The limiting of new facility developments and upgrading of employee housing within the NRA is also a long-term goal or policy for the NPS. The NPS is in the process of implementing the Park Housing Improvement Program to remove substandard housing (old mobile homes or trailers) and replace them with new, energy efficient, multi-family housing. Because additional housing is available in the nearby communities of Page and Big Water, the number of permanent structures will be limited within the NRA to accommodate only those employees that are essential for park operations. Temporary housing, such as mobile homes and trailers, is being phased out and will be replaced with a limited number of permanent single-family and multi-family homes. Some multi-family units and dormitories will also be provided for seasonal employees.





## **Shuttle System**

The NPS is in the process of developing ways to enhance the current Wahweap area shuttle system, especially during peak seasons. A shuttle system would provide benefits by reducing the number of parking spaces needed around high traffic areas, such as the marina and launch ramps. It would also improve traffic circulation and promote increased use of remote parking areas thus decreasing the need to construct parking spaces in undeveloped areas around marina and lodge facilities.

## **Public Meetings**

To assess current facilities and services provided at Wahweap and determine future facility and service enhancements, two public scoping meetings were held in August 1997 to identify the range of issues, concerns, opportunities, and constraints. The five planning issues previously noted were identified and the public meetings were held to solicit input from area users, residents, employees, and representatives of the Concessioner.

The following issues were identified:

- circulation—pedestrian, vehicular, watercraft
- accommodations for people with disabilities
- quality of facilities—roadways, buildings, site furnishings, landscape, etc.
- safety—lighting, security, vandalism
- future facilities—facilities and activities that are presently not supported

During the public review of the Draft DCP and the Environmental Assessment (EA), two public review meetings were held in April, 1998 to solicit comments on the plan's four proposed alternatives. Several common concerns and issues were raised, and were grouped into the following six main topics:

- Proposed expansion of Wahweap Marina
- Need for employee housing within Glen Canyon NRA
- Expansion of the Wahweap Lodge
- Need for new Conference Center
- Relocation of the dry boat storage facility
- Proposed PWC/rental fleet expansion



These topics of concern are addressed in the accompanying Finding of No Significant Impact (FONSI), and will not be discussed in this final plan.



## DESCRIPTION OF FINAL PLAN

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The development that is proposed by this DCP responds to the planning objectives, issues, and concerns described in the previous section. In compliance with the GMP for the Glen Canyon NRA, the proposed development will be contained within the 10,010 acres that comprise the Wahweap area. In keeping with the 1916 NPS Organic Act (16 USC 1 et seq.) and other statutory authorities, proposed developments will not impact wild and scenic river proposals, wilderness, wetlands, or will not be located in a floodplain.

The NPS provides a number of facilities for visitor use including launch ramps, restrooms, sewage treatment, boat pumpouts, fuel docks, parking, picnic area, law enforcement and emergency response, courtesy docks, campground, fish-cleaning station, and day use beach areas. The District Ranger Office (DRO) at Wahweap provides law enforcement and emergency response, fire protection, and visitor information.

The Concessioner's facilities at Wahweap include Wahweap Lodge and restaurant, overnight and monthly boat slip rentals, mooring buoys, executive services, marina store, tour boats, retail store, food service, a service station, and dry boat storage. Their facilities at Stateline include rental houseboats, runabouts, PWCs, rental water toys, and a boat repair yard. The Concessioner also operates the Lake Powell Motel along US 89 (but still within the Wahweap specific area).

In addition to facilities, storage, and parking areas for visitor use, both the NPS and the Concessioner provide back of house maintenance facilities, storage areas, docks, employee housing, and other minor support facilities.

The Utah Division of Wildlife Resources occupies a separate building with seasonal residence, warehouse storage, and adjacent boat storage and small parking area.

Upgrading of existing facilities to meet the requirements of the Americans with Disabilities Act of 1990 will be a major emphasis during the next 10-15 years. All facilities planned or built prior to this legislation are to be evaluated to determine the improvements that are readily achievable to meet accessibility requirements. In particular, the focus will be on improving access to the water, including the marinas, ramps, tour boat loading, swimming areas, fishing access, etc.



# THE PLAN

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The elements of the final plan are the culmination of input from the public, Concessioner, and NPS staff. They are categorized into three main areas: **Housing, Land Facilities, and Marina & Rentals**. (Table 1 includes a summation with order of magnitude costs and phasing schedule.)

Further development (and upgrading or remodeling of facilities) will follow the architectural theme that has recently been established for Wahweap. Concurrently, exterior lighting will be evaluated, upgraded, and installed for all new and existing facilities, both on land and at the marinas, to protect against night sky pollution. Strict adherence to light fixture standards that require soft, uni-directional lighting and energy efficiency is of particular importance.

## HOUSING

A priority of this plan is to comply with current NPS directives to phase out all older mobile home or trailer type housing within units of the NPS. The aim is to provide quality, energy efficient housing for seasonal and permanent employees, and to reduce the number of permanent employees living within units of the NPS. The final plan is to remove two mobile homes from the NPS housing area. These units will not be replaced.

The Concessioner employee mobile homes, trailers, and cabins, including the privately owned mobile homes/trailers, will be phased out (removed). The number of housing units will be reduced to a maximum of 25 permanent housing units, for a core staff of Concessioner employees. Up to 200 seasonal employees will be housed at Wahweap. The mobile homes, trailers, and cabins will be replaced with a limited number of quality dormitories, fourplexes, duplexes, and single family type housing. Some full time and seasonal employees will be required to find suitable housing outside of Glen Canyon NRA, in the neighboring communities. The reduction in housing will be achieved through attrition, replacement, and removal beginning 1999. There will be public meetings to address NPS proposals for implementing the Housing Initiative and the development of the Housing master plan.

The Concessioner will provide outdoor recreation opportunities (basketball, volleyball, etc.) for use by the resident employees as part of the Housing master plan design.

## LAND FACILITIES

The campground will be redeveloped to provide a total of 283 sites (161 RV/tent, 89 tent, 18 walk-in tent, and 15 group sites). Group sites will provide RV and tent accommodations. The Concessioner will build a convenience retail store with campground host/office, showers, and laundry at the west entry into the campground. The existing office at the east entry is to be removed.



Two hundred fifty additional car/trailer parking spaces and 50 single car spaces are to be provided in the Stateline area to relieve the current shortfall of 300 spaces. The shuttle system will be expanded to maximize the use of under utilized and existing remote parking lots at Wahweap. This is primarily to help alleviate the single car parking shortage near the Wahweap Marina, provide a needed service, and to reduce energy use and congestion around the launch ramps and long-term parking areas.

Also, to help reduce congestion and to provide an additional recreation use, a bike trail is planned along a route from Page to the Wahweap area. The route as identified on the plan is conceptual in nature and is subject to further design analysis to identify the most appropriate, cost effective, and sensitive alignment.

A new fire station is to be built adjacent to the District Ranger Office (DRO). The existing fire bay in the NPS maintenance area will be renovated to accommodate the expansion of the adjacent water lab and to provide additional maintenance storage. Additional equipment and NPS boat storage is to be accommodated in an expanded storage yard adjacent to the NPS maintenance yard.

The picnic area will be upgraded with new site furnishings (tables, trash receptacles, etc.). Also, picnic ramadas will be upgraded to match the Wahweap architectural style of the Coves area. The current number of picnic sites is to be increased to 18 with 12 additional single parking spaces.

Water Well #4 will be abandoned on the point west of the rental dock, due to the required maintenance to protect the shoreline. The point is to be developed as a part of The Coves day use area to provide for more fishing opportunities. A replacement well will be drilled at a location to be determined.

A course of action to rehabilitate the existing sewage lagoons is being determined independently from this DCP. The results of studies now in progress will provide data leading to a plan to ensure that replacement or upgrading of the facilities will comply with state regulations.

Electrical, water, and sanitary sewer upgrades will be provided to the hill housing area as required to facilitate the housing plan proposed above. In addition, electrical feeders will be relocated underground.

The visitor RV park (120 sites) is to be relocated to the campground area as previously described, with up to 50 seasonal RV site remaining on the hill. The store and laundry will remain for Concessioner employee use.

Lake Powell Motel will be maintained in operation. However, a change in operation type may be considered. No expansion of Wahweap Lodge is allowed. The existing 350-room allocation will remain in effect. The old pool area at the Lodge can be converted into an area for lodge and boat tour support.



A remodeling or moderate expansion of existing Wahweap Lodge meeting rooms can occur to provide meeting space for up to 200 people. The Navajo Room has a capacity of 160 and may be chosen as the location for this effort following a preliminary feasibility study. This facility is being limited to this capacity for two primary reasons. First, the main purpose of the NRA is to provide lake and land facilities for the general public's use and enjoyment. Additional parking would be required to support any larger expansion. Due to the natural constraints of the lodge area on the point, additional parking will put greater pressure on visitor parking for the lodge and long-term parking in the vicinity. Also, meeting attendees would likely use the lodge for their accommodations and reduce the availability of lodging for recreation visitors. Secondly, the NRA should not be providing commercial opportunities that compete with the local communities. Some hotels in Page currently provide conference facilities that are not utilized to their full potential during the nonshoulder seasons.

An additional restaurant is being considered for the Wahweap area. Three possible locations have been identified: (1) in conjunction with an expansion of the existing Navajo Room discussed above could provide a second story location, (2) at the Lake Powell Sports site, and (3) on Wahweap Marina. A feasibility study will need to be performed to determine the ideal location. The study will need to clearly demonstrate a need for the additional restaurant and also include a study of design alternatives for the three locations so that a preferred location can then be identified.

The dry boat storage area is to remain in its current location with an upgrade of screening added to the perimeter of the area. Lighting is to be replaced to prevent excessive light pollution of the night sky. The construction area will remain in its current location also. However, the work limits will be better defined and limited to a specific area. The dry boat storage area may be moved west along the hill to better accommodate a consolidated construction area. The construction area's screening will be upgraded as well. Any abandoned areas will be rehabilitated to a natural state.

The existing gravel Concessioner utility ramp is to be built as a concrete ramp as lake levels allow.

The Concessioner housekeeping/laundry facility is to remain in its existing location. However, any future expansion will require the entire operation to be relocated outside the Glen Canyon NRA. If relocated, the building will be reused with a function to be determined.

The Utah Department of Parks and Recreation is allowed to build a new 1300 square foot office and to add a maintenance warehouse/storage building. The existing building is to be converted into a bunkhouse for five seasonal employees. Any additional boat storage is to occur outside the NRA. The site currently provides six boat storage bays.



## MARINA & RENTALS

The Wahweap fuel dock will be expanded and replaced to improve safety and to provide secondary containment. The fuel dock at Stateline is to be maintained at its current size and upgraded to improve safety and to provide secondary containment.

The NPS dock facility can be expanded to provide up to 16 additional slips on the service dock. These slips will also be utilized by State of Utah and Arizona law enforcement agencies.

The Wahweap Marina wet storage allocation is to remain at 870 slips. The mooring buoy capacity will remain at 180. Overnight slips can be increased to 90, which includes replacing “H” dock with a new 50 slip dock, and an additional 40 overnight slips at a new facility to be located below Wahweap Lodge. A new dock with up to 20 administrative and 20 commercial slips may be added to the marina. Administrative slips are to be provided without charge to non-emergency government agency personnel working on Lake Powell. Commercial slips will be rented by the Concessioner for use by Independent Business Permittees (IBPs) or concession permittees. The total allocation of slips on the marina for all purposes will then become 960.

The marina store will be expanded to include food service and office space following a study to determine cost effectiveness and exact location. Executive Services will be allowed a small expansion in size on the marina.

Boat rentals are to be maintained at the current limit of 325 (175 houseboats and 150 small boats). Additionally, PWC rentals will be increased from 20 to 35. Although PWC use was a topic of much discussion during the public review sessions of the Draft DCP, the increase of PWCs is warranted to accommodate the demand for tag-alongs with houseboat rentals and represents a customer convenience for that need. Additionally, the unfulfilled demand at boat rentals (5-10 refusals per day in season) is being referred to rental shops in Page. The Concessioner will provide an on-water safety briefing to their customers and will be required to use the best available technology to reduce pollution and noise from PWCs. These conditions will allow the NPS to promote more environmentally friendly technology, and ensures continued protection of the water quality of Lake Powell.

The Concessioner will be limited to 12 tour boats (maximum of 149 passengers each) and will upgrade the existing fleet and facilities to provide accessibility accommodations. This allocation is a reduction from the currently authorized fleet of 20, but is an increase of 3 boats over the existing fleet of 9. Boat technology will be incorporated into design of new and replacement vessels to reduce wake and improve energy efficiency.

A houseboat loading area is to be provided between the Stateline ramp and boat rentals. This facility will include a loading dock, access ramp, and parking adjacent to the existing Stateline parking area. This facility will be constructed only following the resolution of design and management issues associated with its use.



**TABLE 1**  
**WAHWEAP DCP FINAL PLAN ELEMENTS**  
**with Order of Magnitude Costs**

Elements		Preferred Alternative	Cost Summary	
			NPS	Concessioner
HOUSING				
A1	NPS Housing	Two mobile homes removed, no replacement.	\$11,500	
A2	Concessioner Housing	Remove all mobile homes or trailers, replace with a maximum of 25 permanent housing units for only core staff; add up to 16 additional seasonal housing units (dorms) for a total of 200 seasonal units.		\$6,766,500 7 phases
A3 (B13)	Employee Recreation Area (on the hill)	Provide new basketball courts in conjunction with housing master plan design.		\$23,000
LAND FACILITIES				
B1	Campground	Provide 283 sites (161 RV, 89 tent, 18 walk-in tent, & 15 group sites).		\$11,840,000 8 phases
B2	Launch Ramp Parking	Develop 250 car/trailer and 50 single car spaces in the Stateline area.		\$2,110,000
B3	Fire Station	Construct new station adjacent to District Rangers Office (DRO).		\$854,500
B4	NPS Maintenance Area	Renovate existing fire bay to accommodate water lab expansion and maintenance storage; renovate lower warehouse for storage; provide additional equipment and NPS boat storage in the adjacent storage area.	\$599,500	
B5	Bicycle Trail	Provide bicycle trail from Page to Wahweap area. Route is conceptual only, subject to further design analysis.	\$1,536,000	
B6	Picnic Area	Upgrade picnic area; increase picnic shelters to 18; add 12 single car spaces.	\$1,191,650	
B7	Water Well #4	Abandon on lake point and redrill at another location; provide a pedestrian and fishing node as part of Coves area.		\$291,875
B8	Sewage Lagoon	Rehabilitate facility to comply with state regulations.		\$4,000,000
B9 B10 B11	Sanitary Sewer, Electrical, and Potable Water Upgrades	Improve as required to facilitate housing plan proposal in Concessioner employee housing area.		\$430,000
B12	Recreational Vehicle (RV) Park	Relocate all visitor RV sites to campground area (Item B1); up to 50 seasonal employee RV sites to be maintained on the hill; maintain store and laundry facility for Concessioner		\$431,250





Elements		Preferred Alternative	Cost Summary	
			NPS	Concessioner
		employee use.		
B14	Lake Powell Motel	25 rooms remain as commercial motel; change in operation okay.		\$288,750
B15	Wahweap Lodge	No expansion, 350 rooms remain.		\$0
B16	Old Swimming Pool at Wahweap Lodge	Convert use to lodge/boat tours support.		\$104,500
B17	Conference Center and Relocation of Existing Service Station	No separate conference facility; service station to remain at current location. Remodel Wahweap Lodge meeting rooms to accommodate up to 200 people.		\$399,000
B18	Retail Store	Provide convenience retail store in the campground/host office at west campground entrance; include showers and laundry facility and trail to/from campground.		Included in Campground Phase 5
B19	Concession Stand at Coves	No facility.		\$0
B20	Dry Boat Storage	450 dry spaces remain on hill. Upgrade screening. Replace lighting to prevent light pollution.		\$488,050
B21	Construction Area	Consolidate area on hill. Upgrade screening and define limits of area.		\$291,800
B22	Concessioner/ Housekeeping Laundry Facility	Maintain at existing location and size. Relocate outside NRA when additional capacity is required.		\$0
B23	State of Utah	Construct new 1300 square foot office; add maintenance warehouse/storage building; convert existing building into bunkhouse for five seasonal employees. Additional boat storage to be outside NRA (6 boat storage bays exist).	\$250,000 State Funded	
B24 (C9)	Concessioner Utility Ramp	Construct concrete ramp over the existing gravel ramp at Stateline.		\$175,000
B25	Additional Restaurant	Provide an additional restaurant facility. Location to be determined following feasibility study.		\$1,150,000
<b>MARINA &amp; RENTALS</b>				
C1	Fuel Docks	Expand capacity of Wahweap fuel docks & replace docks to improve safety and to provide secondary containment; upgrade Stateline fuel docks to improve safety and to provide secondary containment.		\$961,500
C2	NPS Dock	Provide up to 16 additional slips to NPS Service Dock to include use by Utah and Arizona agencies.	\$239,200	



Elements		Preferred Alternative	Cost Summary	
			NPS	Concessioner
C3	Marina	No change in capacity, slip totals to remain at 870 (excluding Items C7 & C11), mooring buoys to remain at 180; bolster existing parking with shuttle.		\$943,000
C4	Houseboat/Boat Rentals	Total houseboat/boat rentals to remain at 325 (175 houseboats/ 150 small boats); PWCs increased from 20 to 35 total.		\$100,625
C5	Tour Boats	Overall allocation reduced from 20 to 12; three new boats can be added to existing fleet of nine (12 total). Provide accommodation for accessibility.		\$345,000
C6	Marina Service Shop/ Executive Services	Maintain at Wahweap Marina with expansion to be authorized.		\$115,000
C7	Overnight Slips	Replace aging "H" dock on Wahweap Marina, maintain 50 slips allocation; construct new dock below Wahweap Lodge to provide 40 additional slips (total of 90 overnight rental slips).		\$1,403,000
C8	Marina Store	Construct new expanded store; add new office space and food service section.		\$1,147,700
C10	Houseboat Loading	Provide a houseboat loading area between the Stateline ramp and fuel dock.		\$837,400
C11	Administrative/ Commercial Slips	Provide 20 additional slips for administrative and 20 additional slips for commercial purposes to the Wahweap Marina.		\$598,000
<b>TOTAL</b>			<b>\$3,827,850</b>	<b>\$36,095,450</b>

Costs include: 125% multiplier for material & labor index rate for the Page area  
15% for Contractor's mobilization, profit, and overhead  
10% for Architecture and Engineering fees  
15% Contingency

( ) Element ID Numbers in parentheses references the element's Draft DCP designation.



**TABLE 2**  
**PHASING SCHEDULE AND COST SUMMARY**

Phase	National Park Service	Concessioner
<b>Phase 1</b>	<p>A1 Remove 2 seasonal trailers (labor/hauling/disposal). \$11,500</p> <p>B22 Construct State of Utah facility using state funds. \$250,000.</p>	<p>B1 Phase 1 of Campground upgrade. \$1,400,000</p> <p>B3 Construct new Fire Station at DRO. \$854,500</p> <p>B7 Develop new water well and abandon old well; provide pedestrian node and shelter as part of coves area. \$291,875</p> <p>C4 Build facilities for expansion to 35 PWCs; begin renovation of night lighting. \$100,625</p>
<b>Total Cost Phase 1</b>	<b>\$261,500</b>	<b>\$2,647,000</b>
<b>Phase 2</b>		<p>A2 Develop master plan for Concessioner housing area. \$67,665</p> <p>B8 Rehabilitate sewage treatment to comply with state regulations. \$4,000,000</p> <p>C1 Expand capacity of Wahweap fuel docks, improve safety and provide secondary containment; upgrade Stateline fuel docks to improve safety and provide secondary containment. \$961,500</p> <p>C3 Begin shuttle service. \$345,000</p> <p>C6,C8 Expansion of Wahweap Marina Executive Services, offices, and repair shop; design and construct new Wahweap Marina store, add food service, showers, and laundry. \$115,000</p>
<b>Total Cost Phase 2</b>	<b>\$0</b>	<b>\$6,636,865</b>



Phase	National Park Service	Concessioner
<b>Phase 3</b>	<p>B6 Design and begin upgrade to picnic area. \$655,408</p>	<p>A2 Begin removal of Concessioner employee trailers (attrition); construct new permanent and some seasonal housing following master plan. \$1,285,635</p> <p>B1 Phase 2 of Campground upgrade. \$1,410,000</p> <p>B9,B10,B11 Replace electrical, water, and sewer utilities at Concessioner housing area following master plan. \$430,000</p> <p>B12 Relocate RV Park to Campground area and develop 50 seasonal RV sites following master plan. \$431,250</p> <p>B17 Remodel meeting rooms in Lodge to accommodate 200 people. \$399,000</p> <p>C3 Construct shuttle service support facilities. \$345,000</p>
<b>Total Cost Phase 3</b>	<b>\$655,408</b>	<b>\$4,300,885</b>
<b>Phase 4</b>	<p>B4 Begin renovation of existing fire bay to accommodate water lab expansion; increase equipment and boat storage; renovate lower maintenance warehouse. \$599,500</p>	<p>A2 Continue removal of mobile homes/trailers and construct seasonal housing. \$676,650</p> <p>B1 Phase 3 of Campground upgrade. \$1,190,000</p> <p>B16 Convert use of old pool area to boat tour/lodge use. \$104,500</p> <p>B20 Screen dry boat storage facility; accommodate up to 450 boats; renovate night lighting. \$488,050</p> <p>B21 Consolidate construction yard, define size, fence and screen, restore disturbed areas. \$291,800</p> <p>C7 Replace aging “H” dock at Wahweap with new 50 slip dock, add 40 additional overnight slips below Wahweap Lodge (90 total slips). \$1,403,000</p>



Phase	National Park Service	Concessioner
<b>Total Cost Phase 4</b>	<b>\$599,500</b>	<p>C10 Construct a houseboat loading area, ramp, and parking between Stateline ramp and fuel dock. \$837,400</p> <p>C11 Add 20 new slips for official government use and 20 commercial rental slips (for IBP work-boat use, etc.). \$598,000</p> <p><b>\$5,589,400</b></p>

<b>Phase 5</b>	B6 Expand picnic area to total of 18 shelters. \$536,243	<p>A2 Continue removal of mobile homes/trailers and construct seasonal housing. \$676,650</p> <p>B1 Phase 4 of Campground – construct entrance facility. \$2,000,000</p> <p>B2 Construct 250 car/trailer and 50 single car parking spaces at Stateline. \$2,110,000</p> <p>B14 Rehabilitate Lake Powell Motel. \$288,750</p> <p>B24/(C9) Construct new concrete utility ramp at Stateline; renovate night lighting on rental docks. \$175,000</p> <p><b>\$5,250,400</b></p>
<b>Total Cost Phase 5</b>	<b>\$536,243</b>	<b>\$5,250,400</b>

<b>Phase 6</b>	B5 Design bicycle trail from Page to Wahweap. \$138,240	<p>A2 Continue removal of Concessioner employee trailer (attrition); construct seasonal housing. \$1,353,300</p> <p>B1 Phase 5 of Campground upgrade. \$1,700,000</p> <p>C3 Renovate night lighting on Wahweap Marina. \$253,000</p> <p><b>\$3,306,300</b></p>
<b>Total Cost Phase 6</b>	<b>\$138,240</b>	<b>\$3,306,300</b>



Phase	National Park Service	Concessioner
<b>Phase 7</b>	B5 Construct bicycle trail from Coves to Wahweap Blvd. \$384,000	A2 Continue removal of Concessioner employee trailers; construct some new seasonal housing. \$1,353,300  A3/(B13) Provide new basketball court for Concessioner housing area. \$23,000  B1 Phase 6 of Campground upgrade. \$2,490,000
<b>Total Cost Phase 7</b>	<b>\$384,000</b>	<b>\$3,866,300</b>
<b>Phase 8</b>	B5 Complete bicycle trail from Wahweap Blvd. To Hwy. 89. \$1,013,760  C2 Construct new NPS dock with 16 additional slips (40 total). \$239,200	A2 Continue removal of Concessioner employee trailers; and finalize construction of new seasonal housing. \$1,353,300  B1 Complete Campground upgrades (Phases 7&8). \$1,650,000  B25 New restaurant is authorized with design and location to be determined. \$1,150,000  C5 Add new tour boats facilities. \$345,000
<b>Total Cost Phase 8</b>	<b>\$1,252,960</b>	<b>\$4,498,300</b>
<b>Total</b>	<b>\$3,827,850</b>	<b>\$36,095,450</b>



# LIST OF PREPARERS

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# APPENDIX A



Element ID	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Total
<b>NATIONAL PARK SERVICE</b>									
A1	\$11,500								\$11,500
B4				\$599,500					\$599,500
B5						\$138,240	\$384,000	\$1,013,760	\$1,536,000
B6			\$655,408		\$536,243				\$1,191,650
B23	\$250,000								\$250,000
C2								\$239,200	\$239,200
<b>TOTALS</b>	<b>\$261,500</b>	<b>\$0</b>	<b>\$655,408</b>	<b>\$599,500</b>	<b>\$536,243</b>	<b>\$138,240</b>	<b>\$384,000</b>	<b>\$1,252,960</b>	<b>\$3,827,850</b>
<b>CONCESSIONER</b>									
A2		\$67,665	\$1,285,635	\$676,650	\$676,650	\$1,353,300	\$1,353,300	\$1,353,300	\$6,766,500
A3 (B13)							\$23,000		\$23,000
B1	\$1,400,000		\$1,410,000	\$1,190,000	\$2,000,000	\$1,700,000	\$2,490,000	\$1,650,000	\$11,840,000
B2					\$2,110,000				\$2,110,000
B3	\$854,500								\$854,500
B7	\$291,875								\$291,875
B8		\$4,000,000							\$4,000,000
B9/B10/B11			\$430,000						\$430,000
B12			\$431,250						\$431,250
B14					\$288,750				\$288,750
B15			<i>No Improvements.</i>						\$0
B16				\$104,500					\$104,500
B17			\$399,000						\$399,000
B18			<i>Included in B1 Improvements (Campground - Phase 5)</i>						\$0
B19			<i>No Improvements.</i>						\$0
B20				\$488,050					\$488,050
B21				\$291,800					\$291,800
B22			<i>No Improvements.</i>						\$0
B24 (C9)					\$175,000				\$175,000
B25								\$1,150,000	\$1,150,000
C1		\$961,500							\$961,500
C3		\$345,000	\$345,000			\$253,000			\$943,000
C4	\$100,625								\$100,625
C5								\$345,000	\$345,000
C6		\$115,000							\$115,000
C7				\$1,403,000					\$1,403,000
C8		\$1,147,700							\$1,147,700
C10				\$837,400					\$837,400
C11				\$598,000					\$598,000
<b>TOTALS</b>	<b>\$2,647,000</b>	<b>\$6,636,865</b>	<b>\$4,300,885</b>	<b>\$5,589,400</b>	<b>\$5,250,400</b>	<b>\$3,306,300</b>	<b>\$3,866,300</b>	<b>\$4,498,300</b>	<b>\$56,095,450</b>





**TABLE 3**

Element ID	Element	Item Qty	Item	Unit Qty
<b>HOUSING</b>				
<b>A1</b>	NPS Housing	2	Removal of Mobile Homes, Cap or Abandon Utilities	1
<b>A2</b>	Concessioner Housing	42	Removal of Mobile Homes, Cap or Abandon Utilities	1
		8	Removal of Cabins	1
		1	Miscellaneous Road Removal & Utility Abandonment	1
		1	Rehab. Abandoned Residential Area	5
		16	Seasonal Dormitory Units	250
		25	Permanent Housing Units	1,500
<b>A3 (B13)</b>	Employee Recreation Area (on the hill)	1	Basketball Court	1
<b>LAND FACILITIES</b>				
<b>B1</b>	Campground	1	Redeveloped Facility	1
<b>B2</b>	Launch Ramp Parking	50	Single Car Stall	1
		250	Car & Trailer Stall	1
<b>B3</b>	Fire Station	1	New facility	4,400
		1	Miscellaneous Sitework	30,000
<b>B4</b>	NPS Maintenance Area	1	Renovation of Fire Bay as Water Lab	2,000
		1	Renovation of Fire Bay as Storage	2,000
		1	Renovation of Lower Warehouse	4,000
		1	Equipment & Boat Storage	1
<b>B5</b>	Bicycle Trail	32,000	LF of Concrete Path	8
		32,000	LF of Miscellaneous Sitework	8
<b>B6</b>	Picnic Area	18	Picnic Shelters	1
		18	Site Furnishings	1
		12	Single Car Stall	1
		1	Miscellaneous Sitework	100,000
<b>B7</b>	Water Well #4	1	New Well	1
		1	Parking Area	15,000
		1	Shelter	1
		700	LF of Concrete Path	5
<b>B8</b>	Sewage Lagoon	1	Rehabilitate Facility	1
<b>B9/B10/B11</b>	Sanitary Sewer, Electrical, and Potable Water Upgrades	1	Sanitary Sewer Upgrades	2,500
		1	Electrical Upgrades	1
		1	Potable Water Upgrades	2,500
<b>B12</b>	Recreational Vehicle (RV) Park	50	Redevelop RV Spaces	1
<b>B14</b>	Lake Powell Motel	25	Remodel of Rooms	1
		1	Miscellaneous Bldg & Site Improvements	1



### SUPPORTING DATA

Unit	Cost/ Unit	Extended Unit Cost	NPS Total Cost	Concessioner Total Cost	Comments
EA	\$5,750	\$11,500	<b>\$11,500</b>		Allowance
EA	\$5,750	\$241,500			Allowance
EA	\$5,000	\$40,000			Allowance
LS	\$115,000	\$115,000			Allowance
AC	\$11,500	\$57,500			
SF	\$125	\$500,000			Per person. Includes common area (hallways, restrooms, lobby, etc.).
SF	\$155	\$5,812,500			1200 sf living space. Includes community improvements (streets, lighting, walks, etc.).
LS	\$23,000	\$23,000		<b>\$6,766,500</b> <b>\$23,000</b>	
LS	\$11,840,000	\$11,840,000		<b>\$11,840,000</b>	Current budget as established by NPS.
EA	\$3,950	\$197,500			440 sf or 100 stalls/acre. Price established by recent project, including incidental site work.
EA	\$7,650	\$1,912,500		<b>\$2,110,000</b>	850 sf or 50 stalls/acre. Cost proportioned to single car stall cost above.
SF	\$155	\$682,000			
SF	\$5.75	\$172,500		<b>\$854,500</b>	Paving & Landscape
SF	\$115	\$230,000			Does not include laboratory equipment.
SF	\$52	\$104,000			
SF	\$52	\$208,000			
LS	\$57,500	\$57,500	<b>\$599,500</b>		Allowance
SF	\$3.75	\$960,000			6 mile path.
SF	\$2.25	\$576,000	<b>\$1,536,000</b>		Including grading, signage, & protections, etc.
EA	\$28,750	\$517,500			Design similar to Coves shelters.
LS	\$2,875	\$51,750			New tables, waste receptacles, etc.
EA	\$3,950	\$47,400			440 sf or 100 stalls/acre. Price established by recent project, including incidental site work.
SF	\$5.75	\$575,000	<b>\$1,191,650</b>		Paving & Landscape
LS	\$115,000	\$115,000			6" casing, 400' depth, new pump house.
SF	\$9	\$135,000			Proportioned to single car stall cost.
EA	\$28,750	\$28,750			Match existing Coves shelters.
SF	\$3.75	\$13,125		<b>\$291,875</b>	
LS	\$4,000,000	\$4,000,000		<b>\$4,000,000</b>	Current budget as established by NPS.
LF	\$63	\$157,500			8" VCP, 6' depth, taps, & manholes.
LS	\$115,000	\$115,000			Allowance
LF	\$63	\$157,500		<b>\$430,000</b>	6" DIP, 3' depth, fittings, valves, hydrants.
LS	\$8,625	\$431,250		<b>\$431,250</b>	Concrete pad, electrical pedestal, water, & sewer.
EA	\$5,750	\$143,750			
LS	\$145,000	\$145,000		<b>\$288,750</b>	





**TABLE 3**

<b>B15</b>	Wahweap Lodge		No Improvements	
<b>B16</b>	Old Swimming Pool at Wahweap Lodge	1	Demolish Concrete Patio	5,000
		1	Abandon Pool	1
		1	Terrace Improvements	6,000
<b>B17</b>	Conference Center and Relocation of Existing Service Station	200	Remodel for Meeting Room/Person	35
<b>B18</b>	Retail Store		Included in B1 Improvements	
<b>B19</b>	Concession Stand at Coves		No Improvements	
<b>B20</b>	Dry Boat Storage	2,600	LF of CMU Screen Wall	8
		1	Lighting Upgrade	9
<b>B21</b>	Construction Area	2,100	LF of CMU Screen Wall	8
		1	Rehab. Abandoned Residential Area	2
<b>B22</b>	Concessioner/Housekeeping Laundry Facility		No Improvements	
<b>B23</b>	State of Utah	1	Improvements by State	1
<b>B24 (C9)</b>	Concessioner Utility Ramp	1	Concrete Ramp	25,000
<b>B25</b>	Additional Restaurant	1	New Facility	5,000
		1	Miscellaneous Sitework	20,000

**MARINA AND RENTALS**

<b>C1</b>	Fuel Docks	1	Dock Upgrades & Expansions	1
		10	Lighting Fixture Replacement	1
<b>C2</b>	NPS Dock	16	Dock Slips	1
<b>C3</b>	Marina	1	Shuttle Funding	1
		1	Construct Support Facilities	1
		220	Lighting Fixture Replacement	1
<b>C4</b>	Houseboat/Boat Rentals	15	Dock Slips	1
		50	Lighting Fixture Replacement	1
<b>C5</b>	Tour Boats	1	Accessibility Accommodations	1
		1	Miscellaneous Facility Upgrade	1
<b>C6</b>	Marina Service Shop/ Executive Services	1	Expansion of Facilities	1
<b>C7</b>	Overnight Slips	1	Removal of Old "H" Dock	1
		50	New "H" Dock Slips	1
		40	New Dock at Lodge	1
<b>C8</b>	Marina Store	1	Store & Office Expansion	1,500
		1	Showers & Laundry Area	1,500
		1	Food Service Area	1,600
<b>C10</b>	Houseboat Loading	12	New Loading Slips	1
		24	Car & Trailer Stall	1
		1,100	LF of Concrete Path	16
		1	Miscellaneous Sitework	20,000
<b>C11</b>	Administrative/Commercial Slips	40	New Dock Slips	1

**TOTALS**

Note: Costs include: 125% material & labor index rate for the Page area; 15% Contractor's mobilization, profit, and overhead; 10% Architecture & Engineering fee; and a 15% contingency.



## SUPPORTING DATA

		\$0		\$0	
SF	\$2.50	\$12,500			
LS	\$23,000	\$23,000			
SF	\$11.50	\$69,000		\$104,500	
SF	\$57	\$399,000		\$399,000	
		\$0		N/A	
		\$0		\$0	
SF	\$16	\$332,800			Decorative 8x8x16 Units, 8' height.
AC	\$17,250	\$155,250		\$488,050	At 1/2 of the illumination level of a parking lot.
SF	\$16	\$268,800			Decorative 8x8x16 Units, 8' height.
AC	\$11,500	\$23,000		\$291,800	
		\$0		\$0	
LS	\$250,000	\$250,000	\$250,000		Allowance, to be state funded.
SF	\$7	\$175,000		\$175,000	6" thickness.
SF	\$184	\$920,000			
SF	\$11.50	\$230,000		\$1,150,000	Paving & Landscape
LS	\$950,000	\$950,000			Allowance
EA	\$1,150	\$11,500		\$961,500	Mounted on existing poles, qty. estimated.
EA	\$14,950	\$239,200	\$239,200		20' berth.
LS	\$345,000	\$345,000			Current budget as established by NPS.
LS	\$345,000	\$345,000			Current budget as established by NPS.
EA	\$1,150	\$253,000		\$943,000	Mounted on existing poles, qty. estimated.
EA	\$2,875	\$43,125			
EA	\$1,150	\$57,500		\$100,625	Mounted on existing poles, qty. estimated.
LS	\$57,500	\$57,500			Allowance
LS	\$287,500	\$287,500		\$345,000	Current budget as established by NPS.
LS	\$115,000	\$115,000		\$115,000	Allowance
LS	\$57,500	\$57,500			
EA	\$14,950	\$747,500			20' berth.
EA	\$14,950	\$598,000		\$1,403,000	20' berth.
SF	\$172	\$258,000			
SF	\$287	\$430,500			
SF	\$287	\$459,200		\$1,147,700	
EA	\$35,650	\$427,800			44' berth.
EA	\$7,650	\$183,600			850 sf or 50 stalls/acre. Cost proportioned to single car stall cost above.
SF	\$3.75	\$66,000			
SF	\$8	\$160,000		\$837,400	
EA	\$14,950	\$598,000		\$598,000	20' berth.
			\$3,827,850	\$36,095,450	



**TABLE 4  
PHASING SUMMARY**

Element ID	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Total
<b>NATIONAL PARK SERVICE</b>									
A1	\$11,500								\$11,500
B4				\$599,500					\$599,500
B5						\$138,240	\$384,000	\$1,013,760	\$1,536,000
B6			\$655,408		\$536,243				\$1,191,650
B23	\$250,000								\$250,000
C2								\$239,200	\$239,200
<b>TOTALS</b>	<b>\$261,500</b>	<b>\$0</b>	<b>\$655,408</b>	<b>\$599,500</b>	<b>\$536,243</b>	<b>\$138,240</b>	<b>\$384,000</b>	<b>\$1,252,960</b>	<b>\$3,827,850</b>
<b>CONCESSIONER</b>									
A2		\$67,665	\$1,285,635	\$676,650	\$676,650	\$1,353,300	\$1,353,300	\$1,353,300	\$6,766,500
A3 (B13)							\$23,000		\$23,000
B1	\$1,400,000		\$1,410,000	\$1,190,000	\$2,000,000	\$1,700,000	\$2,490,000	\$1,650,000	\$11,840,000
B2					\$2,110,000				\$2,110,000
B3	\$854,500								\$854,500
B7	\$291,875								\$291,875
B8		\$4,000,000							\$4,000,000
B9/B10/B11			\$430,000						\$430,000
B12			\$431,250						\$431,250
B14					\$288,750				\$288,750
B15	<i>No Improvements.</i>								\$0
B16				\$104,500					\$104,500
B17			\$399,000						\$399,000
B18	<i>Included in B1 Improvements (Campground - Phase 5)</i>								\$0
B19	<i>No Improvements.</i>								\$0
B20				\$488,050					\$488,050
B21				\$291,800					\$291,800
B22	<i>No Improvements.</i>								\$0
B24 (C9)					\$175,000				\$175,000
B25								\$1,150,000	\$1,150,000
C1		\$961,500							\$961,500
C3		\$345,000	\$345,000			\$253,000			\$943,000
C4	\$100,625								\$100,625
C5								\$345,000	\$345,000
C6		\$115,000							\$115,000
C7				\$1,403,000					\$1,403,000
C8		\$1,147,700							\$1,147,700
C10				\$837,400					\$837,400
C11				\$598,000					\$598,000
<b>TOTALS</b>	<b>\$2,647,000</b>	<b>\$6,636,865</b>	<b>\$4,300,885</b>	<b>\$5,589,400</b>	<b>\$5,250,400</b>	<b>\$3,306,300</b>	<b>\$3,866,300</b>	<b>\$4,498,300</b>	<b>\$36,095,450</b>



## APPENDIX B

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